

Claims

- 1 A liquid crystal display (LCD) apparatus for use with a portable electronic apparatus, said LCD apparatus including a LCD module and a back light module, said portable electronic apparatus including a printed circuit board and a housing having a depression, said LCD module being disposed within said depression, said back light module comprising:

a back light plate disposed under said depression; and

a light source disposed on said printed circuit board for generating a light;

wherein said back light plate and said housing are formed in integral, and said back light plate includes a plurality of holes allowing passage of the light generated by said light source.
- 2 The LCD apparatus of claim 1, wherein said back light plate includes a first surface and a second surface, said first surface includes a light-reflecting film to reflect said light; said LCD module is disposed on said second surface.
- 3 The LCD apparatus of claim 1, wherein said back light plate includes a plurality of concave surfaces and

a plurality of convex surfaces.

4 The LCD apparatus of claim 1, wherein said light source includes a light emitting diode (LED).

5 The LCD apparatus of claim 1, wherein said light source includes a cold cathode lamp.

6 A liquid crystal display (LCD) apparatus, comprising:

an upper housing including a depression;

a back light plate disposed under said depression,

said back light plate including a first surface

and a second surface;

a printed circuit board disposed under said back light plate;

a light-reflecting film disposed on said first surface and between said back light plate and

said printed circuit board;

a LCD module disposed on said second surface;

a light source disposed on said printed circuit board for generating a light; and

a cover panel disposed over said LCD module and covering said depression;

wherein said back light plate and said housing are formed in integral, and said back light plate includes a plurality of holes allowing passage of the light generated by said light source.

- 7 The LCD apparatus of claim 6, further including a foam polymer disposed between said LCD module and said cover panel to prevent dust from cumulating on said LCD module.
- 8 The LCD apparatus of claim 6, wherein said back light plate includes a plurality of concave surfaces and a plurality of convex surfaces.
- 9 The LCD apparatus of claim 6, wherein said light source includes a light emitting diode (LED).
- 10 The LCD apparatus of claim 6, wherein said light source includes a cold cathode lamp.
- 11 The LCD apparatus of claim 6, wherein said cover panel is made of a transparent material.
- 12 The LCD apparatus of claim 11, wherein said transparent material includes a plastic material.
- 13 The LCD apparatus of claim 11, wherein said transparent material includes a glass material.